Federal Aviation Administration – Regulations and Policies
Aviation Rulemaking Advisory Committee

Transport Airplane and Engine Issue Area
Electrical Systems Harmonization Working Group

Task 4 – Harmonize 25.1362

Task Assignment

[Federal Register: November 26, 1999 (Volume 64, Number 227)]
[Notices]
[Page 66522-66524]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Aviation Rulemaking Advisory Committee; Transport Airplane and Engine Issues--New and Revised Tasks

AGENCY: Federal Aviation Administration (**FAA**), DOT.

ACTION: Notice of new and revised task assignments for the Aviation Rulemaking Advisory Committee (ARAC).

SUMMARY: Notice is given of new tasks assigned to and accepted by the Aviation Rulemaking Advisory Committee (ARAC) and of revisions to a number of existing tasks. This notice informs the public of the activities of ARAC.

FOR FURTHER INFORMATION CONTACT: Dorenda Baker, Transport Airplane Directorate, Aircraft Certification Service (ANM-110), 1601 Lind Avenue, SW., Renton, WA 98055; phone (425) 227-2109; fax (425) 227-1320.

SUPPLEMENTARY INFORMATION:

Background

The **FAA** has established an Aviation Rulemaking Advisory Committee to provide advice and recommendations to the **FAA** Administrator, through the Associate Administrator for Regulation and Certification, on the full range of the **FAA**'s rulemaking activities with respect to aviation-related issues. This includes obtaining advice and recommendations on the **FAA**'s commitment to harmonize its Federal Aviation Regulations (FAR) and practices with its trading partners in Europe and Canada.

One area ARAC deals with is transport airplane and engine issues. These issues involve the airworthiness standards for transport category

[[Page 66523]]

airplanes and engines in 14 CFR parts 25, 33, and 35 and parallel provisions in 14 CFR parts 121 and 135. The corresponding Canadian standards are contained in Parts V, VI, and VII of the Canadian Aviation Regulations. The corresponding European standards are contained in Joint Aviation Requirements (JAR) 25, JAR-E, JAR-P, JAR-OPS-Part 1, and JAR-26.

As proposed by the U.S. and European aviation industry, and as

agreed between the Federal Aviation Administration (**FAA**) and the European Joint Aviation Authorities (JAA), an accelerated process to reach harmonization has been adopted. This process is based on two procedures:

(1) Accepting the more stringent of the regulations in Title 14 of the Code of Federal Regulations (FAR), Part 25, and the Joint Airworthiness Requirements (JAR); and

(2) Assigning approximately 41 already-tasked significant regulatory differences (SRD), and certain additional part 25 regulatory differences, to one of three categories:

<bullet> Category 1--Envelope
<bullet> Category 2--Completed or near complete
<bullet> Category 3--Harmonize

The Revised Tasks

ARAC will review the rules identified in the ``FAR/JAR 25 Differences List,'' dated June 30, 1999, and identify changes to the regulations necessary to harmonize part 25 and JAR 25. ARAC will submit a technical report on each rule. Each report will include the cost information that has been requested by the **FAA**. The tasks currently underway in ARAC to harmonize the listed rules are superseded by this tasking.

New Tasks

The **FAA** has submitted a number of new tasks for the Aviation Rulemaking Advisory Committee (ARAC), Transport Airplane and Engine Issues. As agreed by ARAC, these tasks will be accomplished by existing harmonization working groups. The tasks are regulatory differences identified in the above-referenced differences list as Rule type = P-SRD.

New Working Group

In addition to the above new tasks, a newly established Cabin Safety Harmonization Working Group will review several FAR/JAR paragraphs as follows:

ARAC will review the following rules and identify changes to the regulations necessary to harmonize part 25 and JAR:

(1) Section 25.787;
(2) Section 25.791(a) to (d);
(3) Section 25.810;
(4) Section 25.811;
(5) Section 25.819; and
(6) Section 25.813(c).

ARAC will submit a technical report on each rule. Each report will include the cost information that has been requested by the **FAA**.

The Cabin Safety Harmonization Working Group would be expected to complete its work for the first five items (identified as Category 1 or 2) before completing item 6 (identified as Category 3).

Schedule

Within 120 days of tasking/retasking:

<bullet> For Category 1 tasks, ARAC submits the Working Groups' technical reports to the **FAA** to initiate drafting of proposed rulemaking documents.

<bullet> For Category 2 tasks, ARAC submits technical reports, including already developed draft rules and/or advisory materials, to the **FAA** to complete legal review, economic analysis, coordination, and issuance.

June 2000: For Category 3 tasks, ARAC submits technical reports including draft rules and/or advisory materials to the **FAA** to complete legal review, economic analysis, coordination, and issuance.

ARAC Acceptance of Tasks

ARAC has accepted the new tasks and has chosen to assign all but one of them to existing harmonization working groups. A new Cabin Safety Harmonization Working Group will be formed to complete the remaining tasks. The working groups serve as staff to ARAC to assist ARAC in the analysis of the assigned tasks. Working group recommendations must be reviewed and approved by ARAC. If ARAC accepts a working group's recommendations, it forwards them to the **FAA** and ARAC recommendations.

Working Group Activity

All working groups are expected to comply with the procedures adopted by ARAC. As part of the procedures, the working groups are expected to accomplish the following:

1. Document their decisions and discuss areas of disagreement, including options, in a report. A report can be used both for the enveloping and for the harmonization processes.
2. If requested by the **FAA**, provide support for disposition of the comments received in response to the NPRM or review the **FAA**'s prepared disposition of comments. If support is requested, the Working Group will review comments/disposition and prepare a report documenting their recommendations, agreement, or disagreement. This report will be submitted by ARAC back to the **FAA**.
3. Provide a status report at each meeting of ARAC held to consider Transport Airplane and Engine Issues.

Partcipation in the Working Groups

Membership on existing working groups will remain the same, with the formation of subtask groups, if appropriate. The Cabin Safety Harmonization Working Group will be composed of technical experts having an interest in the assigned task. A working group member need not be a representative of a member of the full committee.

An individual who has expertise in the subject matter and wishes to become a member of the Cabin Safety Harmonization Working Group should write to the person listed under the caption FOR FURTHER INFORMATION CONTACT expressing that desire, describing his or her interest in the tasks, and stating the expertise he or she would bring to the working group. All requests to participate must be received no later than December 30, 1999. The requests will be reviewed by the assistant chair, the assistant executive director, and the working group chair, and the individuals will be advised whether or not the request can be accommodated.

Individuals chosen for membership on the Cabin Safety Harmonization Working Group will be expected to represent their aviation community segment and participate actively in the working group (e.g., attend all meetings, provide written comments when requested to do so, etc.). They also will be expected to devote the resources necessary to ensure the ability of the working group to meet any assigned deadline(s). Members are expected to keep their management chain advised of working group activities and decisions to ensure that the agreed technical solutions do not conflict with their sponsoring organization's position when the subject being negotiated is presented to ARAC for a vote.

Once the working group has begun deliberations, members will not be added or substituted without the approval of the assistant chair, the assistant executive director, and the working group chair.

The Secretary of Transportation has determined that the formation and use of ARAC are necessary and in the public interest in connection with the performance of duties imposed on the **FAA** by law.

[[Page 66524]]

Meetings of ARAC will be open to the public. Meetings of the working groups will not be open to the public, except to the extent that individuals with an interest and expertise are selected to participate. No public announcement of working group meetings will be made.

Issued in Washington, DC, on November 19, 1999.
Anthony F. Fazio,
Executive Director, Aviation Rulemaking Advisory Committee.
[FR Doc. 99-30774 Filed 11-24-99; 8:45 am]
BILLING CODE 4910-13-M

Recommendation Letter

400 Main Street
East Hartford, Connecticut 06108

Pratt & Whitney
A United Technologies Company

September 18, 2000

Federal Aviation Administration
800 Independence Avenue, SW
Washington, DC 20591

Attention: Mr. Thomas McSweeny, Associate Administrator for Regulation and Certification

Subject: Submittal of ARAC Recommendations

Reference: FAA Tasking to TAEIG, dated November 19, 1999.

Dear Tom,

In accordance with the reference tasking, the ARAC Transport Airplane and Engine Issues Group is pleased to forward the attached "Fast Track" report for 25.1362 to the FAA as an ARAC recommendation. This report has been prepared by the Electrical Systems Harmonization Working Group of TAEIG.

Sincerely yours,

C. R. Bolt

C. R. Bolt
Assistant Chair, TAEIG

copies: *Brian Overhuls - Boeing
Kristin Carpenter - FAA
*Effie Upshaw - FAA

*letter only

CRB_09_18_00_2

Acknowledgement Letter

U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave., S.W.
Washington, D.C. 20591

JAN 22 2001

Mr. Craig Bolt
Assistant Chair, Transport Airplanes
and Engines Issues Group
400 Main Street
East Hartford, CT 06108

Dear Mr. Bolt:

This letter acknowledges receipt of your September 18, 2000, letter transmitting a fast track report on behalf of the Transport Airplane and Engine Issues (TAE) for proposed § 25.1362.

I would like to thank the Aviation Rulemaking Advisory Committee, particularly those members associated with TAE and the Electrical Systems Harmonization Working Group for their cooperation in using the fast track process and completing the working group report in a timely manner. The report will be forwarded to the Transport Airplane Directorate for review. The Federal Aviation Administration's progress will be reported at the TAE meetings.

TASK #4
ANM-00-088-A

Sincerely,

Anthony F. Fazio
Director, Office of Rulemaking

Recommendation

ARAC ESHWG Report 25.1362

1 - What is underlying safety issue to be addressed by the FAR/JAR?

JAR 25X1362 addresses electrical supplies for emergency conditions. This JAR and associated ACJ was created to ensure that electrical supplies are maintained to emergency services (such as fuel and hydraulic shut-off valves) so that these may be closed after the main power sources have been switched off by the flight crew.

JAR 25X1362 was introduced at JAR-25 Change 3 (effective 31.12.76). There is no FAR 25 equivalent.

This requirement was considered necessary concerning the provision of an adequate electrical supply after an emergency landing or ditching.
JAR 25X1362 was further modified at JAR-25 Change 14 (effective 27.05.94) as a result of NPA 25DF-191 by introducing new ACJ material to clarify the intent of requirement for the provision of electrical supplies for such emergency conditions.

2 - What are the current FAR and JAR standards relative to this subject?

Current FAR text:

None

Current JAR text:

JAR 25X1362 Electrical supplies for emergency conditions

A suitable supply must be maintained to those services which are required, either by this JAR-25 (e.g. JAR 25.1195) or in order that emergency drills may be carried out, after an emergency landing or ditching. The circuits to these services must be so designed and protected that the risk of their causing a fire, under these conditions, is minimised. (See ACJ 25X1362.)

2a – If no FAR or JAR standard exists, what means have been used to ensure this safety issue is addressed?

No equivalent standard exists in FAR. Partial coverage is provided by FARs 25.1189, 25.1195, 25.1309 and 25.1585.

3 - What are the differences in the FAA and JAA standards or policy and what do these differences result in?:

Application of JAA standards has sometimes resulted in different designs for the powering of appropriate emergency services. There is no FAR equivalent rule.

4 - What, if any, are the differences in the current means of compliance?

For JAR 25X1362, a compliance method is given by ACJ 25X1362 as follows:

ACJ 25X1362
Electrical Supplies for Emergency Conditions (Interpretative Material)
See JAR 25X1362
1 Consideration should be given to the possibility that all electrical power sources are likely to be disconnected or isolated by the flight crew just prior to, or during, an emergency (or crash) landing, to prevent them becoming a source of ignition.
2 In order that it shall not be necessary to reconnect power sources to enable a power supply to be provided to the emergency services, it would be acceptable to power such services from a 'hot' battery bus. These circuits would need to be so protected that the risk of their causing a fire under these conditions is minimised.
3 The emergency services which may require such a supply should include fuel and hydraulic shut-off valves, engine and APU fire extinguisher systems. (See also JAR 25.1189 and 25.1195).

ADDITIONAL JAA INTERPRETATION

Is a specific battery required to power the emergency services?
Application of 25.561(b)(3) loads to the emergency services and supplies?

1. JAR 25X1362 by itself has no structural implications (see points 3 and 4).
JAR 25X1362 is requesting the provision of electrical power, after an emergency landing, ditching or crash, to those services which may be required after such an event.

2. The solution implied by the ACJ 25X1362 paragraph 2 is to power the emergency services from a 'hot' battery bus. This means that the aeroplane battery (batteries) can be used for that purpose. A specific dedicated battery is not required, nor it is forbidden.

3. Aeroplane battery (batteries) would have to meet 25.561(b) loads, if they are likely to cause injury to occupants or create an additional hazard to the aeroplane if they break loose.

4. The circuits to the emergency services should be designed and installed such that the risk of damaging them during the emergency landing is minimised.

5 – What is the proposed action?

Due to the fact there is no existing FAR 25.1362 and as there has been inconsistent application of the JAR, the ESHWG recommends that the JAR 25X1362 be revised and a new FAR/JAR 25.1362 be created as detailed in paragraph 6 below. The ACJ will also be revised and adopted as an AC/ACJ by the FAA/JAA, as detailed in paragraph 13 below. This proposed rule and advisory material will provide flexibility by allowing either an appropriate AFM procedure and/or design implementation to achieve compliance.

6 – What should the harmonized standard be?

FAR/JAR 25.1362 Electrical supplies for emergency conditions

A suitable supply must be provided to those services which are required, in order that emergency procedures may be carried out, after an emergency landing or ditching. The circuits for these

services must be so designed, protected and installed such that the risk of their causing a fire, under these conditions, is minimised. (For JAR see ACJ 25.1362) (Note: FAR will not reference the AC)

7 – How does this proposed standard address the underlying safety issue (identified under #1)?

The underlying safety issue is to provide appropriate electrical power supplies for emergency conditions. This proposed standard ensures flexibility by allowing either an appropriate AFM procedure and/or design implementation to achieve compliance.

8 - Relative to the current FAR, does the proposed standard increase, decrease, or maintain the same level of safety? Explain.

The proposed standard increases the level of safety by focusing on appropriate methods to ensure that electrical power is provided for emergency services during emergency landing or ditching conditions.

9 - Relative to current industry practice, does the proposed standard increase, decrease, or maintain the same level of safety? Explain.

The proposed standard maintains the level of safety and is in line with current industry practice.

10 - What other options have been considered and why were they not selected?:

Other options considered were adoption of the existing JAR and ACJ, and deletion of the existing JAR and ACJ. However, for the reasons stated above, a revision to the rule was adopted to provide greater flexibility for compliance.

11 - Who would be affected by the proposed change?

As the proposal is in line with current design practices, the effect is considered to be minimal for aircraft operators and manufacturers affected by this change.

12 - To ensure harmonization, what current advisory material (e.g., ACJ, AMJ, AC, policy letters) needs to be included in the rule text or preamble?

None.

13 - Is existing FAA advisory material adequate? If not, what advisory material should be adopted?

There is no FAA Advisory Material.

The following is proposed as advisory material as derived from the existing ACJ to 25X1362:

AC/ACJ 25.1362
Electrical Supplies for Emergency Conditions
See FAR/JAR 25.1362

1 The emergency services which may require a supply include fuel shut-off valves, hydraulic shut-off valves and engine / APU fire extinguisher systems.

2 An appropriate design and/or unambiguous AFM procedures should be provided in order to prevent disconnection of the electrical supply to the required services before the emergency procedures are fully completed.

14 - How does the proposed standard compare to the current ICAO standard?

This proposal is in line with ICAO Annex 8 Chapter 8, Electrical Systems.

15 - Does the proposed standard affect other HWG's?

No.

16 - What is the cost impact of complying with the proposed standard

As the proposal is in line with current industry practices, the cost impact will be negligible.

17. - If advisory or interpretive material is to be submitted, document the advisory or interpretive guidelines. If disagreement exists, document the disagreement.

The proposed AC/ACJ is specified in 13 above.

18.- -Does the HWG wish to answer any supplementary questions specific to this project?

No.

19. – Does the HWG want to review the draft NPRM at "Phase 4" prior to publication in the Federal Register?

Yes.

20– In light of the information provided in this report, does the HWG consider that the "Fast Track" process is appropriate for this rulemaking project, or is the project too complex or controversial for the Fast Track Process? Explain.

The ESHWG considers that the fast track harmonization process is appropriate for this rule.

FAA Action – Not Available